AMENDMENTS TO THE SPECIFICATION

Please amend the specification as follows:

[0059] At a first stage, the Fourier transform is performed based upon a formula (1) with respect to a reference waveform "u(t)" (see FIG. 7A) so as to calculate a complex Fourier component "U(ω)." A waveform shown in FIG. 7D ~~corresponds to such a waveform which is wanted to be received by a recepting element, and this waveform of FIG. 7D~~ becomes a waveform equivalent to the reference waveform "u(t)."

$$U(\omega) = \frac{1}{2\pi}\int_{-\infty}^{\infty} u(t)e^{-i\omega t}dt \text{ ----- formula (1)}$$

[0060] Next, a phase delay is applied to the complex Fourier component "U(ω)", and an inverse Fourier transform is carried out with respect to the resulting complex Fourier component so as to calculate a calculated waveform "u (2d, t)" (see FIG. 7D) after the reference waveform "u(t)" is propagated over a distance "2d" (formula (2)). This phase delay corresponds to a time duration when the reference waveform "u(t)" is propagated in a reciprocating manner over a distance "d" (namely, distance defined from guided wave transmitting/receiving element 1 to center of inspection region "R"), namely a time duration when the reference waveform "u(t)" is propagated over the distance "2d." Finally, the calculated waveform "u (2d, t)" is time-inverted in accordance with the following formula (4), so that a transmission waveform "u' (t)" (see FIG. 7C). When the waveform u' (t) is transmitted at a position of X=O, the waveform is changed to a waveform of Fig.7D which is equivalent to the reference waveform u(t).